

DATE: February 1, 1988

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)
LONG ISLAND LIGHTING COMPANY)
(Shoreham Nuclear Power Station,)
Unit 1))

Docket No. 50-322-OL-3
(Emergency Planning)

AFFIDAVIT OF DAVID T. HARTGEN, Ph.D., P.E.

STATE OF NEW YORK)
) SS:
COUNTY OF ALBANY)

David T. Hartgen, Ph.D., P.E., being duly sworn, hereby states as follows:

1. I am currently employed as a Principal Transportation Analyst for the New York State Department of Transportation. In that job, I have developed extensive experience with traffic planning matters, including traffic time estimates and the data and methods for computing such estimates in an accurate manner. A statement of my qualifications can be found in the OL-3 record as an attachment to New York State Exhibit 5 to the 1987 reception centers proceeding.

2. I am familiar with the evidence and testimony in the record concerning evacuation time estimates. My familiarity with the Shoreham licensing proceeding is based on my participation as

an expert witness in the 1984 emergency planning hearings and the 1987 reception center hearings. I have previously been found to be an expert qualified to testify on matters related to evacuation time estimates.

3. In connection with LILCO's Motion for Summary Disposition of the Hospital Evacuation Issue (Dec. 18, 1987) (hereafter "LILCO's Motion"), I have reviewed: the Motion itself; the NRC Staff Response to LILCO's Motion for Summary Disposition of the Hospital Evacuation Issue (Jan. 15, 1988) (hereafter, "Staff Response"); the so-called "February 20 Draft Materials" (Feb. 20, 1987) supplementing LILCO's Plan provisions for the general public reception centers; and testimony submitted by Mr. Lieberman in the 1987 reception center proceeding regarding, in particular, average travel speeds.

4. The Affidavit of Dr. Urbanik (Attachment 1 to the Staff Response) (hereafter, the "Affidavit") states in paragraph 3 that Dr. Urbanik has "evaluated the evacuation time estimates for three hospitals in or near the 10-mile Emergency Planning Zones provided in the affidavit [of Mr. Lieberman] and the draft revision 9 of the LILCO Plan which provides additional information on assumptions, methodology, vehicles required, and speed of vehicles." The Affidavit then states in paragraph 4 that Dr. Urbanik "agree[s] with the assumptions, speeds, and methodology used in the hospital evacuation time estimates" and

that the hospital evacuation time estimates are "suitable."

5. I too have reviewed the hospital evacuation time estimates set forth in Mr. Lieberman's affidavit (Attachment 3 to LILCO's Motion). However, I cannot determine what Dr. Urbanik means when he states that he has evaluated "draft revision 9 of the LILCO Plan." If Dr. Urbanik is referring only to the representations in LILCO's Motion, then it is not possible for me to support his analysis. If, on the other hand, Dr. Urbanik is referring to something that he had access to besides the representations in LILCO's Motion, then I cannot assess the validity of Dr. Urbanik's conclusions because I cannot tell upon what he based his opinion.

6. A sound analysis of LILCO's hospital evacuation time estimates would require, at a minimum, the following information, which is not set forth in LILCO's Motion or the Staff's Response:

- a. Identification of the specific reception hospitals to be used.
- b. Hospital utilization rates and excess capacity for the identified reception hospitals.
- c. Data on the routes to be traveled from the EPZ hospitals to the reception hospitals.
- d. Data on the routes the transporting vehicles will take to make reverse trips from the reception hospitals back to the EPZ hospitals (to the extent that multiple trips are contemplated).
- e. Traffic speed estimates for the reverse trips.

- f. Data on the projected number of patients, identified according to mobility, to be transported to the reception hospitals.
- g. Data reflecting the likelihood that in the event of an emergency requiring evacuation of the entire 10-mile EPZ, the designated potential reception hospitals closest to the EPZ will or may be occupied at or near capacity due to the arrival of general public evacuees, thereby requiring EPZ hospital evacuees to seek reception hospitals further from the EPZ and, consequently, increasing: (1) the time required to evacuate the first wave of hospital evacuees; (2) the time required for the evacuation vehicles' return trip; and (3) the time required for the second wave of hospital evacuation.

7. Accordingly, until additional information, including, at a minimum, that described above in paragraph 6, is provided, it is not possible to assess the reliability of LILCO's hospital evacuation time estimates or the soundness of Dr. Urbanik's conclusions regarding those time estimates.

8. The above facts are true and accurate to the best of my knowledge and belief. I am competent to testify to such facts and would so testify in any formal proceeding on this matter.

David T. Hartgen
 David T. Hartgen, Ph.D P.E.

Sworn to and subscribed before me this 1st day of ~~January~~ February, 1988.

Richard J. Zahnleuter
 Notary Public

RICHARD J. ZAHNLEUTER
 Notary Public, State of New York
 Qualified in Albany County - Saratoga County
 No. 4766248
 Commission Expires ~~March 30, 1988~~
 Nov 30, 1988

DOCKETED
February 1, 1988 ^{USNRC}

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

'88 FEB -2 P3:45

Before the Atomic Safety and Licensing Board

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of)
)
LONG ISLAND LIGHTING COMPANY)
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(Shoreham Nuclear Power Station,)
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(Emergency Planning)

CERTIFICATE OF SERVICE

I hereby certify that copies of SUFFOLK COUNTY, STATE OF NEW YORK, AND TOWN OF SOUTHAMPTON REPLY TO "NRC STAFF RESPONSE TO LILCO MOTION FOR SUMMARY DISPOSITION WITH RESPECT TO COMPLIANCE WITH SECTION 50.47(c)(1)(i) & (ii)"; REPLY OF SUFFOLK COUNTY, THE STATE OF NEW YORK AND THE TOWN OF SOUTHAMPTON TO THE NRC STAFF RESPONSE IN SUPPORT OF LILCO'S MOTION FOR SUMMARY DISPOSITION OF THE HOSPITAL EVACUATION ISSUE; and OPPOSITION OF SUFFOLK COUNTY, THE STATE OF NEW YORK AND THE TOWN OF SOUTHAMPTON TO LILCO'S MOTION FOR SUMMARY DISPOSITION OF CONTENTIONS 1, 2, AND 9 -- IMMATERIALITY have been served on the following this 1st day of February 1988 by U.S. mail, first class.

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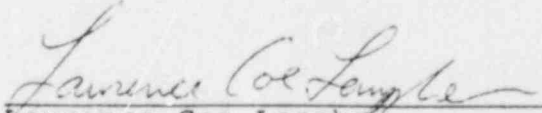
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